

REMARKS

The Application has been reviewed in light of the Office Action dated November 3, 2004. Claims 1, 2, 4, 6, 9, 13, 17, 18, 21, 25, and 28 have been amended. Claims 5 and 27 have been canceled. Accordingly, claims 1-4, 6-26, and 28-30 remain pending. Reconsideration and allowance of the Application are respectfully requested in light of the foregoing amendments and the following remarks.

Claims 1-4, 12-16, and 24-26 stand rejected under 35 USC 102(c) as being anticipated by U.S. Patent No. 6,501,506 to Miura ("Miura"). The rejection is traversed.

The present invention relates to an imaging apparatus that includes first and second capacitive elements for respectively storing first and second signal levels, sensed during respective first and second integration periods, by a photosensitive element. As such, independent claim 1 has been amended to recite: "a first switchable element for electrically coupling an output of said photosensitive element with said first capacitive element during a first integration period, and (v) a second switchable element for electrically coupling an output of said photosensitive element with said second capacitive element during a second integration period."

As acknowledged by the Office Action, Miura "does not explicitly disclose a circuit. . . wherein the controller is configured for providing signals to cause the first capacitive storage element to store a first signal level sensed by the photosensitive element during a first integration time and to cause the second capacitive element to store a second signal level sensed by the photosensitive element during a second integration time." Office Action, at 5. Nor are these claim limitations inherent in or suggested by Miura. In fact, Miura's teaching of two light signals relates to a capture of two different light conditions, such as two images or an image and a background condition, which is different than the claimed first and second integration periods, as noted by the Office Action. See Col. 11, lines 37-43. For at least these reasons, Miura does not anticipate or render obvious the claimed invention as recited by claim 1.

Similarly, independent claim 13 recites an integrated circuit comprising, *inter alia*, “a controller configured for providing signals to control the selective coupling of the first and second capacitive storage elements and the photosensitive element during a respective first and second integration period for the pixel.” And, independent claim 25 recites a method comprising “storing a first signal level, sensed by a photosensitive element during a first integration period, in a first capacitive storage element in a pixel; storing a second signal level, sensed by the photosensitive element during a second integration period, in a second capacitive storage element in the pixel.” For at least the reasons given above regarding the allowability of claim 1, claims 13 and 25 are also allowable over Miura.

Claims 2-4, 12, 14-16, 24, and 26 each depend from one of claims 1, 13, or 25 and contain all of the limitations recited by the independent claims. For at least these reasons, Miura does not anticipate or render obvious the claimed inventions recited by claims 2-4, 12, 14-16, 24, and 26. Withdrawal of the rejection is respectfully requested.

Claims 5-22, 17-23, and 27-30 stand rejected under 35 USC 103(a) as being unpatentable over Miura in view of U.S. Patent No. 6,628,335 to Numazaki et al. (“Numazaki”). The rejection is traversed.

Numazaki relates to an image capture apparatus that includes a reflected light image detecting section. With respect to the present invention, the Office Action states that Numazaki teaches that “signals are accumulated in the first and second charge accumulating sections.” Office Action, at 5. The Office Action continues, “This means that the timing controller is configured for providing signals to cause the first capacitive storage element to store a first signal level sensed by the photosensitive element during a first integration time and to cause the second capacitive element to store a second signal level sensed by the photosensitive element during a second integration time.” Office Action, at 5-6. This conclusion, however, is neither taught nor suggested by Numazaki, but rather, is based on applying impermissible hindsight when considering the claimed invention.

Numazaki does not teach or suggest “a first switchable element for electrically coupling an output of said photosensitive element with said first capacitive element during a first integration period, and (v) a second switchable element for electrically coupling an output of said photosensitive element with said second capacitive element during a second integration period.” In fact, integration periods are not considered in the Numazaki reference. Rather, Numazaki teaches “a first charge accumulation section 12” that collects charges while a “light emitting section 1 emits light in pulses,” and that a “second charge accumulation section 13” collects charges “while the light emitting section 1 is not emit (sic) light.” Col. 4, lines 3-12. Put another way, “the electric charge obtained by receiving the reflected light and the external light such as room light and sun light is accumulated in the first charge accumulating section 12 and the electric charge obtained by receiving only the external light is accumulated in the second charge accumulating section 13.” Col. 4, lines 13-18. Much like Miura, Numazaki relates to capturing two distinct images or an image and a background condition. Thus, Numazaki does not teach the internal accumulation of charges associated with first and second integration periods of a pixel cell, as in the claimed invention.

For at least these reasons, none of the cited references, whether considered alone or in combination, teach or suggest all of the claim limitations recited by claims 1-4, 6-26, and 28-30. Withdrawal of all outstanding rejections is respectfully requested.

Application No.: 10/038,546

Docket No.: M4065.0860/P860

In view of the above amendment, applicant believes the pending application is in condition for allowance. Allowance of the application is solicited.

Dated: January 28, 2005

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